

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Previously presented) A method for producing a transgenic Gramineae plant comprising the steps of:
 - (a) isolating a zygote from a Gramineae plant to be transformed in a way that said isolated zygote becomes substantially free from its naturally surrounding tissue,
 - (b) introducing a DNA composition comprising a genetic component into the genome of said Gramineae plant, wherein said introduction is mediated by Agrobacterium transformation into said isolated zygote;
 - (c) regenerating Gramineae plants from said zygotes which have received said genetic component; and
 - (d) identifying a fertile, transgenic Gramineae plant whose genome has been altered through the stable introduction of said genetic component.
2. (Previously presented) The method of claim 1, wherein the Gramineae plant is selected from the group consisting of wheat, maize and barley.
3. (Previously presented) The method of claim 1, where in the Gramineae plant is a Triticum species.
4. (Previously presented) The method of claim 1, wherein the Gramineae plant is regenerated from said isolated zygote by a method comprising co-cultivating said isolated zygote and/or a zygotic embryo derived therefrom with a feeder system.
5. (Currently amended) The method of claim [[1]] 4, wherein the Gramineae plant is regenerated from said isolated zygote by a method comprising co-cultivating said isolated zygote and/or a zygotic embryo derived therefrom with the feeder system comprises a culture of isolated

immature pollen or pistils.

6. (Currently amended) The method of claim [[1]] 4, wherein the Gramineae plant is regenerated from said isolated zygote by a method comprising co-cultivating said isolated zygote and/or a zygotic embryo derived therefrom with the feeder system comprises

- a) a culture of androgenetically developing barley pollen or
- b) a culture of wheat or barley pistils or
- c) any combination of a) and b).

7. (Previously presented) The method of claim 4, wherein the zygotes and the feeder system are physically separated in a way to prevent mixing of the different cell types but to allow exchange of growth factors, proteins, media components, and other low molecular weight compounds.

8. (Previously presented) The method of claim 4, wherein co-cultivation of the zygotes and the feeder system are employed already during Agrobacterium co-cultivation in a way that the co-cultivation culture of the zygotes and Agrobacterium is physically separated from the feeder system to prevent contact of the Agrobacteria with the feeder system but to allow exchange of growth factors, proteins, media components, and other low molecular weight compounds.

9. (Previously presented) The method of claim 1, wherein said genetic component is transmitted through a complete sexual cycle of said transgenic Gramineae plant to its progeny, wherein said progeny does not comprise a selectable or screenable marker gene.

10. (Previously presented) The method of claim 1, wherein said method does not comprise a step which leads to dedifferentiation of the zygote or a zygote-derived embryo.

11. (Previously presented) The method of claim 1, wherein said genetic component comprises an expression cassette comprising a nucleic acid sequence operably linked to a promoter active in said Gramineae plant, wherein expression of said nucleic acid sequence

confers a phenotypically distinguishable trait to said Gramineae plant.

12. (Previously presented) The method of claim 1, wherein the pH of the medium used during co-cultivation of the isolated zygote with Agrobacterium is kept in a range from about 5.8 to about 6.0.